



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,276	07/24/2000	David A. Brown	2037.2006-000	5305

21005 7590 09/10/2003

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

TRAN, PHILIP B

ART UNIT	PAPER NUMBER
----------	--------------

2155

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/624,276

Applicant(s)

BROWN, DAVID A.

Examiner

Philip B Tran

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Muller et al (Hereafter, Muller), U.S. Pat. No. 6,021,132.

Regarding claim 1, Muller teaches a switch comprising :

a reserved pool of buffers in a shared memory, the reserved pool of buffers reserved for an egress port and a shared pool of buffers in the shared memory, the shared pool of buffers shared by a plurality of egress ports (i.e., shared memory with pool of buffers shared by output ports) [see Abstract and Col. 2, Lines 20-63 and Figs. 2-4]; and

a pool select logic which selects a free buffer to allocate from the reserved pool for storing data received from an ingress port to be forwarded to the egress port, and

deallocates the selected buffer after the data has been forwarded to the egress port (i.e., shared memory manager 220 with buffer tracking unit 329 performing buffer allocation) [see Abstract and Figs 5-7 and Col. 9, Line 5 – Col. 10, Line 54].

Regarding claim 2, Muller further teaches a switch as claimed in claim 1 wherein the pool select logic selects a free buffer in the shared pool upon detecting no free buffer in the reserved pool [see Col. 9, Line 59 – Col. 10, Line 20 and Col. 10, Lines 48 –54 and Col. 12, Lines 40-64].

Regarding claim 3, Muller further teaches a switch as claimed in claim 1 further comprising a multicast pool of buffers in a shared memory shared by a plurality of egress [see Col. 7, Lines 30-41 and Col. 9, Lines 27-34].

Regarding claim 4, Muller further teaches a switch as claimed in claim 3 ports wherein the pool select logic selects a free buffer from the multicast pool upon detecting an IP Multicast data packet received from an ingress port [see Col. 8, Lines 22-36 and Col. 9, Lines 5-56].

Regarding claims 5-8, Muller further teaches a switch as claimed in claim 3 further comprising a total free counter storing the number of free buffers in shared memory, the total free counter preset to the total number of buffers in the shared memory wherein the sum of the buffers in the multicast pool, the reserved pool and the shared pool is equal or greater than the total number of buffers in the shared memory

wherein the pool select logic determines the availability of a free buffer in the shared memory dependent on the number of free buffers in the shared memory stored in the total free counter [see Col. 10, Line 8 – Col. 12, Line 6].

Claims 9-16 and 17-24 are rejected under the same rationale set forth above to claims 1-8.

***Other References Cited***

3. The following references cited by the examiner but not relied upon are considered pertinent to applicant's disclosure.

A) Kamaraj et al, U.S. Pat. No. 6,501,757.

B) Momirov, U.S. Pat. No. 6,484,209.

C) Holden, U.S. Pat. No. 6,151,301.

D) Kao, U.S. Pat. No. 6,523,060.

E) Yin, U.S. Pat. No. 6,219,728.

F) Giroux et al, U.S. Patent Application Publication No. US 2002/0089933.

4. A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS ACTION IS SET TO EXPIRE THREE MONTHS, OR THIRTY DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. FAILURE TO RESPOND WITHIN THE PERIOD FOR RESPONSE WILL CAUSE THE APPLICATION TO

BECOME ABANDONED (35 U.S.C. § 133). EXTENSIONS OF TIME MAY BE  
OBTAINED UNDER THE PROVISIONS OF 37 CAR 1.136(A).

5. Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Philip Tran whose telephone number is (703) 308-8767.  
The Group fax phone number is (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Hosain T. Alam, can be reached on (703) 308-6662.

Any inquiry of a general nature or relating to the status of this application should  
be directed to the Group receptionist whose telephone number is (703) 305-3900.

PBT  
Philip B. Tran  
Art Unit 2155  
Sept 04, 2003

  
HOSAIN ALAM  
SUPERVISORY PATENT EXAMINER